DOCUMENT RESUME

ED 109 404 CE 004 238

AUTHOR Wallace, Juanita D.
TITLE A Comparison of Procedures for Evaluation of Vocational Education Programs. Research Series No. 45.
INSTITUTION Tennessee State Board for Vocational Education, Nashville.; Tennessee Univ., Knoxville. Occupational Research and Development Coordinating Unit.
PUB DATE Feb 75
NOTE 35p.

EDRS PRICE MF-$0.76 HC-$1.95 PLUS POSTAGE
DESCRIPTORS *Comparative Analysis; *Educational Assessment; Educational Programs; *Evaluation Methods; *Program Evaluation; Research Projects; Secondary Education; *Vocational Education
IDENTIFIERS Rays Self Checklist of Quality Vo Tech Programs; Site Visits; Tennessee

ABSTRACT

The study compares two methods of evaluating vocational programs in Tennessee: an on-site instrument used by the Tennessee State Division of Vocational Education and a self-evaluation method using Ray's Self-Checklist of Quality Vocational-Technical Programs. The study evaluates vocational programs in office occupations and distributive, agricultural, trade and industrial, and home economics occupations education in 18 schools in 13 county and one city school system in Tennessee. On-site evaluation data were converted to numerical ratings according to the 60 elements of the Ray instrument by a panel of experts and were statistically compared, element by element, to numerical ratings on the Ray instrument completed by the local school professionals. Since the professionals and the panel of experts agreed on only 3 of the 60 elements, the study concludes (among other things) that information obtained from currently used instruments for on-site evaluations by visiting teams was not adequate to determine relative quality of vocational-technical programs. Several recommendations for improving the Ray instrument as a profitable evaluation device are included. Ten pages of appendixes include Ray's components for quality vocational-technical programs, the Ray Self-Checklist, and a Tennessee map of school systems involved in the study. (JR)

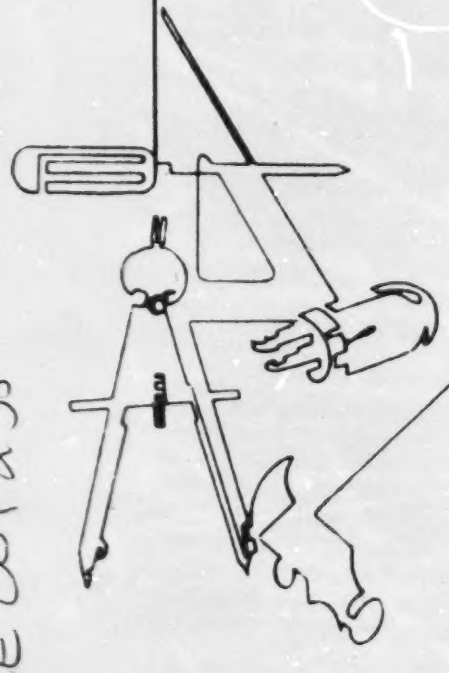
****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

APR 29 1975

TENNESSEE RESEARCH COORDINATING UNIT • UNIVERSITY OF TENNESSEE COLLEGE OF EDUCATION
309 MOUNTCASTLE STREET • KNOXVILLE, TENNESSEE 37916

ED109404

RCU Research Series



U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

CE 004 238

ED109404

Research Series

No. 45

A COMPARISON OF PROCEDURES FOR EVALUATION OF VOCATIONAL EDUCATION PROGRAMS

By
Juanita D. Wallace

Tennessee Research Coordinating Unit
University of Tennessee College of Education

and

Tennessee State Board for Vocational Education
Sam H. Ingram, Executive Officer
Nashville, Tennessee 37219

February, 1975

This monograph constitutes the forty-fifth publication in a series of studies, papers, and reports on Vocational-Technical Education at the Tennessee Research Coordinating Unit. The study on which the monograph is based was conducted by Juanita DePew Wallace while completing the requirements for a doctoral degree in Vocational-Technical Education at The University of Tennessee.

Pamela Moss, Editor
Tennessee Research Coordinating Unit

FOREWORD

The concern for evaluation of vocational education programs was evidenced in the 1963 Vocational Education Act, which suggested a five-year plan for evaluation of all programs. In 1971, the Tennessee State Advisory Council reiterated the concern in a recommendation which called for a more comprehensive plan for evaluation of vocational education programs in Tennessee.

Most methodologies used in evaluating vocational education programs have, in the past, involved on-site visits by a team of consultants in addition to self-evaluation. These procedures, used by the Tennessee State Division of Vocational-Technical Education, have proven to be time-consuming and financially burdensome. Thus, the need for an in-depth study on evaluation procedures soon became obvious.

The purpose of this monograph is to present the findings of a study which compare 1) the evaluation procedure utilizing on-site visits by a team of consultants and 2) the Ray Self-Checklist of Quality Vocational-Technical Programs developed by Dr. John Ray at The University of Tennessee.

A glossary of terms and a bibliography of relevant sources have been provided for those interested in

additional reading. In an effort to give the reader more in-depth information on the two evaluation systems compared, the following have been included in the appendices: 1) a list of components which comprise quality vocational-technical programs, 2) Ray's Self-Checklist, and 3) a map indicating the geographic location of school systems involved in the study.

The intent of the monograph is to offer pertinent information and facts on the evaluation of vocational education programs. It is hoped that the findings presented will provide those interested in quality programs with a more comprehensive view of evaluation procedures.

Garry R. Bice, Director
Tennessee Research Coordinating Unit
University of Tennessee, Knoxville
College of Education

TABLE OF CONTENTS

	Page
Foreword	iii
Glossary of Terms	vi
Introduction	1
The Purpose and Objectives of the Study	2
Scope and Limitations of the Study	3
Methods and Procedures	4
Review of Related Literature	7
Summary of Findings	8
Conclusions	10
Recommendations	11
Recommendations Related Specifically to the Ray Self-Checklist	11
Recommendations Related to the Study in General	12
Bibliography	14
Appendices	17
A. Components for "Quality" Vocational-Technical Programs	17
B. Ray Self-Checklist of Quality Vocational-Technical Education Programs	19
C. Tennessee Map of School Systems Involved in the Study	26

GLOSSARY OF TERMS

The following terms were used in the study and are defined here for clarification.

Quality vocational-technical program. This is a program which will provide current occupational information, enroll an interested, qualified student (regardless of his mental or physical potential), assess his needs and abilities, prepare him for successful entry-level employment and place him in the occupational "cluster" for which he, his parents, the vocational teacher, guidance counselors, and other teachers have jointly agreed he should train. "Quality" programs will always strive to satisfy basic needs and to develop job-getting, job-keeping and job-advancing skills (Ray, 1973).

On-site visiting team. The team is a panel of experienced vocational educators who visit and evaluate a local school vocational education program.

Panel of experts. This refers to persons from the field of vocational education, state division personnel, teacher educators, and local directors of vocational programs, who have served on at least two site visits and have at least three years of teaching experience. The task of the panel of experts was to convert the summary of the state evaluation instruments to the Ray Self-Checklist evaluation.

Professionals. Professionals is a term used to represent the teacher, guidance counselor, and principal in each of the participating local schools involved in the study. The three above named persons individually completed the Ray Self-Checklist on the specified vocational program in his school.

Components. Components are those factors which are necessary in a quality vocational educational program and are listed in Appendix A.

Elements. Elements are those items which measure more specifically the Components and are listed in Appendix B.

I. INTRODUCTION

Evaluation of vocational-technical programs has become a necessity for vocational education leaders since the passage of the Vocational Education Act of 1963 and the ensuing Amendments of 1968. The 1963 Act suggested evaluation of all programs on a five-year plan and the 1968 Amendments mandated it. Concern about accountability in all of education also added to the emphasis on evaluation.

In Tennessee during 1971, the State Advisory Council recommended the establishment and implementation of a comprehensive plan to evaluate programs on the basis of quality and process. Research had revealed that methodologies used to evaluate vocational education programs were inadequate. Most of those methodologies, which required on-site visits by a team of consultants in addition to a self-study or self-evaluation, were deficient in providing input for planning and improving programs (Ray, 1973). The on-site visits had proven to be time consuming and costly in terms of human and financial resources. The Tennessee State Division of Vocational-Technical Education utilized this type of evaluating procedure.

In order to effectively plan and/or redirect vocational programs, a thorough, systematic and continuous evaluation procedure was needed (Starr, 1970). Thus, the

need for a more efficient way to evaluate vocational programs in Tennessee was the basis for this study.

As a result of the direction and priority given to evaluation of vocational-technical education programs, Dr. John Ray (1973) initiated a study through the Tennessee Research Coordinating Unit at The University of Tennessee to develop an evaluation model for vocational programs at the secondary school level in Tennessee. Therefore, the two methods compared in the study were the method used by the Tennessee State Division of Vocational-Technical Education and the self-evaluation method using Ray's Self-Checklist of Quality Vocational-Technical Programs.

II. THE PURPOSE AND OBJECTIVES OF THE STUDY

With the emphasis on accountability there was an increasing concern for program outputs and the importance of providing programs at the least possible cost to society. This concern, along with the mandates of 1963 and 1968, illustrated the need for the development and utilization of the most efficient and effective system of evaluation. In the 1971 recommendation, the Tennessee State Advisory Council focused attention on that need.

Ray concluded in his research that the procedure used for evaluation must not be complicated or consume excessive amounts of human or financial resources. The primary cause of the deficiency found in most popular

evaluation methods was the lack of identification and verification of quality program indicators.

In the study, Ray developed and established a consensus definition of quality vocational education programs and identified a list of twenty essential components which were expanded to form a sixty element checklist. This became the Ray Self-Checklist. The model was designed to be easily understood by its users with attention given to the time required for use of the instrument.

Since the problem of the study was to find a more comprehensive plan for evaluating vocational education programs in the State of Tennessee, it was necessary to determine whether a checklist system of evaluation obtained comparable results as a system using team visits for evaluating vocational programs. In comparing the two methods of evaluation, two objectives were set forth:

1. To determine if the State on-site team evaluation instrument yielded the same evaluative results, in terms of quality indicators, as the Ray Self-Checklist yielded;

2. To determine if there were items included in the Ray Self-Checklist that were not included in the on-site team instruments.

III. SCOPE AND LIMITATIONS OF THE STUDY

The study encompassed those vocational programs in the thirteen county and one city school systems which were

evaluated by the Tennessee State Division of Vocational-Technical Education system in 1972-73. The study included programs in Distributive Education, Office Occupations, Agriculture Education, Trade and Industrial Education, and Home Economics Occupations Education. The sample consisted of those systems which requested a state vocational evaluation during the school year 1972-73.

Consumer and Homemaking Education and Health Education programs were not included as part of the study. The study was further limited to the evaluation system and procedures included in the State Division of Vocational-Technical Education visiting team evaluation process and the Ray Self-Checklist evaluation instrument.

IV. METHODS AND PROCEDURES

In the latter part of March, 1973, the eighteen summary evaluation forms completed by the State evaluation teams were obtained from the State Division of Vocational-Technical Education. The eighteen schools represented thirteen county school systems and one city school system. These evaluation reports were from schools which had been evaluated by using official evaluation instruments approved by the State Division of Vocational-Technical Education in 1972-73. The instrument used by the state for the on-site visit was developed by a special task force in the Program Planning Division of the State Division of Vocational-Technical Education. Ten areas of vocational instruction

were included for reaction of the evaluators with respect to commendations, suggestions, and recommendations which were of a more subjective nature than the Ray Self-Checklist. The Ray Self-Checklist rated sixty quality indicators on a 0 to 5 basis with 5 representing the highest possible value.

In April, 1973, support and endorsement for involvement in the study were solicited and obtained from local administrators in thirteen of the fourteen systems which had participated in the state evaluations. The thirteen systems provided a total of fifteen schools for the study. The one school system which did not choose to participate in the study included three local schools. During the first two weeks of May, 1973, the Ray Self-Checklist instrument was administered to each of the professionals (teachers, principals, and guidance counselors) in the fifteen local schools included in the study.

One vocational program per school was selected. In selecting the program within the school the only criterion was to strive for equal representation from the three regions of the state and from the five vocational service areas. The original eighteen schools included six schools in each of the three regions of the state. The vocational service area representation included distributive education (4), vocational office education (4), trade and industrial education (4), home economics education (1), and agriculture education (5) programs.

A panel of experts was selected with consideration given to equal representation of geographic location, vocational service area, and representation from vocational teacher educators, state department personnel and local directors of vocational education. In the East Tennessee region distributive education and home economics education were represented by a local director of vocational education and a teacher educator, respectively. The Middle Tennessee region was represented by a business teacher educator and a local teacher of trade and industrial education. A local teacher of agriculture and a regional supervisor of business education from the state department represented the West Tennessee region.

In June, 1973, the members of the panel of experts were invited to the University of Tennessee at Knoxville for two days. At the time of that visit the experts were requested to convert the summary data from the State Division evaluation summary report forms to the Ray Self-Checklist instrument. Only data supplied by four panelists who had the greatest degree of agreement were included in the study.

In using the panel, intra-rater reliability was established. This was accomplished by having each panelist convert the summary data to the Ray Self-Checklist on all schools involved in the study and then by computing Kendall's Coefficient of Concordance "W" (Siegel, 1956) to determine intra-rater reliability.

The on-site evaluation data converted to numerical ratings on the Ray Self-Checklist instrument by the panel of experts were compared, element by element, to numerical ratings on the Ray Self-Checklist completed by the local school professionals.

The intervals between means of the converted on-site evaluation data and means of the self-checklist data were determined and presented graphically by sixty elements. A chart was used to plot the mean ratings.

Student's "t" tests (Siegel, 1966) were used to determine the differences between panel and local school personnel ratings on each element. The "t" values were tested for significance beyond the .05 level.

V. REVIEW OF RELATED LITERATURE

The body of literature related to evaluation of vocational programs contained many references identifying and establishing the need for evaluation and accountability in vocational-education programs. Program evaluation was identified as a continuous process of gathering valid and reliable data for the purpose of assessing the extent to which predetermined objectives and levels of performance have been attained. The major purpose identified for conducting an evaluation was to provide information for making sound, rational choices and decisions about vocational education programs.

The literature stressed the need for empirical evidence relating to need for quality vocational education programs in relation to expenditures for these programs. Increased concern by the public and educators not only for quality vocational programs but also for expenditures involved has made accountability a necessity. Federal and state governments have recognized the need for evaluation and accountability by enacting legislation which mandates, funds, and provides for evaluation of vocational education programs.

The review of literature revealed a scarcity of formal research to substantiate the design, validity, or use of evaluation methods or instruments. Many research studies recommended a combination of visiting team evaluation and self-evaluation methods, but they provided no empirical evidence to support the need for including both methods in the process. No studies were found which compared the visiting team method or evaluation with the self-evaluation method.

The literature indicated the complexity of the instruments being used in evaluating vocational education programs. The time-consuming nature and costliness of the procedures was frequently stressed throughout the literature.

VI. SUMMARY OF FINDINGS

1. The professionals and the panel of experts indicated basic agreement on only three of the 60 elements.

2. On three of the elements, the panel of experts was unable to obtain enough information from on-site visit reports to make any kind of judgment.

3. Of a possible 900 observations, counselors were unable to make observations on the 60 elements 155 times (17.2%).

4. Of a possible 900 observations, teachers were unable to make observations on the 60 elements 28 times (3.1%).

5. Of a possible 900 observations, principals were unable to make observations on the 60 elements 56 times (6.2%).

6. Of a possible 900 observations, the panel of experts was unable to make observations on the 60 elements 347 times (38.5%).

7. The panel of experts and professionals agreed only on elements related to physical facilities.

8. The mean scores of all professionals on each element were consistently higher, and in most cases considerably higher, than the mean scores given those elements by the panel of experts.

9. The range and mean value of scores given on each element varied considerably more on the panel of expert scores than it did with the professional scores.

10. All of the professionals were able to make observations on 19 (31.5%) of the 60 elements.

11. Forty-five percent of the time there were 20% or less response from the panelists.

12. Seventy-five percent of the time there was 50% or less response from the panelists.

13. Elements 22-27 had the lowest response rate from the professionals, specifically from the counselors.

VII. CONCLUSIONS

1. Information obtained from currently used instruments for on-site evaluations by visiting teams was not adequate to be able to determine relative quality of vocational-technical programs.

2. Currently used state evaluation instruments were not definitive or specific enough to identify the same quality aspects of vocational-technical programs as did the Ray Self-Checklist evaluation instrument.

3. Professional vocational-technical educators could not analyze team visit reports and adequately determine the quality of selected vocational-technical programs. State evaluation procedures need to include checklists where more observations could be made.

4. Guidance counselors were less able to identify elements of quality vocational-technical programs than were teachers or principals.

5. Some of the elements on the Ray Self-Checklist overlapped in their interpretation.

6. A panel of experts, unfamiliar with each individual situation and trying to glean information from an on-site team report, was not able to identify outstanding elements of quality vocational programs as easily as the professionals who were closest to the situation.

VIII. RECOMMENDATIONS

The recommendations of the study were divided into two categories--those related specifically to the Ray Self-Checklist and those related to the study in general.

Recommendations Related Specifically to the Ray Self-Checklist

The following recommendations were listed as a result of the comments and questions most consistently made by the professionals and members of the panel of experts. These recommendations were not based on specific data. Rather they were suggested as a result of the researcher's involvement and association with those who responded to the instrument.

1. The "0" rating needed to be better defined or omitted.

2. Element 6 needed to be refined so that it did not confuse respondents with Elements 16, 17, and 18 (See Appendix B).

3. All elements needed to be stated consistently either in the positive or the negative form, specifically

Element 48 which was stated in the negative. The other elements appeared to be stated in the positive form.

4. The instrument needed to be arranged so that a total score could be determined on each component in order that the component scores could be compared in terms of a quality profile.

Recommendations Related to the Study in General

1. Those persons responsible for conducting evaluations of vocational-technical programs need to consider the results of this study for the development of evaluative instruments.

2. If team visit processes are to be used for evaluation, instruments should be revised to include more quality indicators, such as those included in the Ray Self-Checklist and should be more objective in nature.

3. Ray's Self-Checklist should be subjected to further validation by checking with former students and employers of graduates of vocational-technical programs.

4. Ray's Self-Checklist should be further validated by having visiting teams use the checklist in a school and comparing the results of the team with those of the teacher, guidance counselor, and principal in the same school.

5. An in-service training program for guidance counselors should be provided to prepare them to respond more adequately to the evaluation checklist.

6. Since the state evaluation instrument and Ray Self-Checklist do not identify the same quality indicators it is recommended that additional studies be completed to further validate the Ray instrument. This further validation would in turn provide a more firm basis for the conclusions and other recommendations for this study.

BIBLIOGRAPHY

1. An Overview of the Three Phase System for Statewide Evaluation of Occupational Education Programs. Springfield: Illinois State Board of Vocational Education and Rehabilitation, Vocational and Technical Division, ND.

2. Annual Evaluation Report. Tennessee State Advisory Council on Vocational Education to the U.S. Commissioner of Education and the National Advisory Council on Vocational Education, 1971.

3. Assessment Guidelines for Programs Under the Vocational Education Act of 1963. Hartford: Connecticut State Department of Education, Division of Vocational Education, January, 1969.

4. Bruhns, Arthur E. Evaluation Processes Used to Assess the Effectiveness of Vocational-Technical Programs. Los Angeles: University of California, Graduate School of Education, December, 1961.

5. Byram, Harold M. Development and Demonstration Procedures for Evaluation of a Comprehensive Program of Vocational Education in the Public School. East Lansing: Michigan State University, College of Education, Bureau of Educational Research Services, October, 1965.

6. Byram, Harold M. Evaluation Systems for Local Programs of Vocational-Technical Education: Final Report. East Lansing: Michigan State University, College of Education, Bureau of Educational Research Services, October, 1968.

7. Byram, Harold M. Five-State Try Out and Demonstration Program to Determine the Generalizability of an Evaluation System for Local Programs of Vocational and Technical Education: Final Report. East Lansing: Michigan State University, College of Education, February, 1971.

8. Byram, Harold M. "Locally Directed Evaluation of Local Programs of Vocational Education." Institute for Improving Vocational Education: Final Report. Fayetteville: University of Arkansas, July, 1970.

9. Byram, Harold M. Locally Directed Evaluation of Local Vocational Programs. East Lansing: Michigan State University, College of Education, Bureau of Educational Research Services, March, 1970.

10. Characteristics of Quality Vocational-Technical Education Programs. Office of Education (DHEW), Washington, D.C.: Division of Vocational-Technical Education, ND.

11. Coster, John K. The Role of the Southern Association of Colleges and Schools in Improving the Quality and Quantity of Programs of Occupational Education. Raleigh: North Carolina State University, Center for Occupational Education, 1968.

12. Evaluation of Your Cooperative Distributive Education Program, Bulletin No. 1070. Baton Rouge: Louisiana State Department of Education, Distributive Education Section, 1966.

13. Evaluative Criteria, Washington, D.C.: National Study of Secondary School Evaluation, 1960.

14. Fourth Report--National Advisory Council on Vocational Education: Reports on the Implementation of the Vocational Education Amendments of 1968. Washington, D.C.: Government Printing Office, 1971.

15. Klit, John A. "Evaluation-the Key to Developing Quality Vocational Programs," Illinois Vocational Progress. Springfield: Board of Vocational Education and Rehabilitation, Vocational and Technical Education Division, November, 1970.

16. Lessinger, Leon. "Accountability," RCU Circulator. Knoxville: Tennessee Research Coordinating Unit for Vocational Education, November, 1970.

17. Moss, Jerome, Jr. The Evaluation of Occupational Education Programs Technical Report. Minneapolis: University of Minnesota, Research Coordinating Unit in Occupational Education, September 1968.

18. National Seminar on Research in Evaluation of Occupational Education. Raleigh: North Carolina State University, Center for Occupational Education, 1968.

19. Norton, Robert E. Guide to Improving Vocational Education Evaluation. Fayetteville: University of Arkansas, College of Education, December, 1970.

20. Norton, Robert E., Love, E. Lamar, and Rolloff, John A. Institute for Improving Vocational Education Evaluation: Final Report. Fayetteville: University of Arkansas, July 1970.

21. Program Analysis Questionnaire for Vocational and Technical Education. Providence: Rhode Island State Department of Education, Division of Vocational-Technical Education.

22. Rajpal, Puran L. "Relationship Between Expenditures and Quality Characteristics of Education in Public Schools," Journal of Educational Research, October, 1969.

23. Ray, John R. Development of an Evaluation Model for Tennessee Secondary Vocational-Technical Education Programs: Final Report. Knoxville: The University of Tennessee, Tennessee Research Coordinating Unit, January, 1973.

24. Reynolds, Harris W. Evaluative Criteria for Vocational-Technical Programs. Harrisburg: Pennsylvania State Department of Public Instruction, Bureau of Curriculum Planning and School Evaluation, 1967.

25. Self-Evaluation. South Carolina State Department of Education, South Carolina Vocational Education Media Center, 1970.

26. Siegel, Sidney. Nonparametric Statistics for the Behavioral Sciences. New York: McGraw-Hill Book Company, Inc. 1956.

27. Starr, Harold. A System for State Evaluation of Vocational Education: Final Report. Columbus: The Ohio State University Center for Vocational and Technical Education, May, 1970.

28. Vocational Education Act of 1963, Public Law 88-210. Washington, D.C.: Government Printing Office, 1963.

29. Vocational Education Amendments of 1968, Public Law 90-576. Washington, D.C.: Government Printing Office, 1968.

30. Vocational Education and Self-Evaluation. The Vocational Education Instructor Appraises Product and Process. Washington, D.C.: American Vocational Association, August, 1971.

31. Vocational Education Evaluation Summary. Nashville: State Department of Education, Division of Vocational-Technical Education, Program Planning and Evaluation Section, 1973.

32. Ward, William Gary. Process Evaluation of Vocational Education: Review and Synthesis of Selected Research in Education Documents. Research Coordinating Unit Report No. 12. Stillwater: Oklahoma State University, December, 1970.

33. Woodin, Ralph J. Guidelines for the Development of Instruments for Evaluation in Vocational Agriculture. Columbus: The Ohio State University, The Center for Vocational Education, 1966.

34. Wyllie, Eugene Donald. An Evaluation Plan for Business Education Programs in High Schools. South-Western Monographs in Business and Economic Education, No. 109. Dallas: South-Western Publishing Company, September, 1963.

APPENDIX A

COMPONENTS FOR "QUALITY" VOCATIONAL-TECHNICAL PROGRAMS*

1. Complement, not conflict with the objectives of the total educational program.

2. Have verbal, visible support of administration, guidance counselors, and other teachers (as much as academic programs).

3. Provide broad-based testing program and vocational guidance services so that each student can select a proper vocational program.

4. Arrange parent-student-teacher conference when student is enrolled and throughout his program, if feasible.

5. Provide flexibility for student to move within program if need and/or ability indicates a move is advisable.

6. Provide physical facilities, equipment and instructional materials appropriate to occupational "cluster" for which student is being trained.

7. Use only teachers who have completed state certification requirements for area in which they teach, who have recent related occupational experience, who are proficient in skills they teach, and who engage in professional growth activities.

8. Provide cooperative or directed occupational experience and/or simulated occupational experience.

9. Actively use "representative" advisory committees in occupational needs assessment, program planning, and evaluation.

10. Conduct periodic follow-up surveys of former students and keep up-to-date records for use in program planning and evaluation.

11. Make periodic surveys of employment opportunities and use findings to keep curriculum relevant.

12. Have plan of continuing and systematic internal evaluation for improvement and development of program.

13. Endorse and implement active leadership development program through related vocational youth organizations.

---

*Ray, 1973.

14. Develop proper attitudes toward work, good employer-employee relationships, and efficient work habits and create the desire to continue personal and occupational development.

15. Stress each student's <u>total</u> development within his mental and physical abilities.

16. Provide for satisfactory completion of defined program for at least 90 percent of students who do not transfer or withdraw for health reasons.

17. Place students at the completion of their programs in the occupational "cluster" for which they are trained.

18. Make an organized school placement service available to graduates.

19. Keep public informed--have "participatory" support of community.

20. Use any available means to acquaint students at all levels with vocational-technical career opportunities.

APPENDIX B

RAY SELF-CHECKLIST OF QUALITY VOCATIONAL-TECHNICAL EDUCATION PROGRAMS

School _____ Program Area _____

Teacher _____ Principal _____ Guidance Counselor _____

Please rate frankly your vocational-technical program using the following scale:

5 Excellent; very well done
4 Satisfactory; adequate
3 Some improvements needed; no crucial weakness(es)
2 Major improvements needed
1 No effort made
0 No opportunity to observe; not applicable

	5	4	3	2	1	0
1. The program objectives and requirements are known and supported by the faculty and other students.						
2. Vocational-technical students have an opportunity to participate in extra-curricular activities.						
3. Projects in your program are related to other subject area classes.						
4. Teachers and guidance counselors refer interested and qualified students to vocational-technical programs regardless of grade point averages.						
5. Interaction among administrators, guidance counselors, vocational teachers, and other teachers creates a good learning environment.						

	5	4	3	2	1	0
6. Resources (time / space / money) are sufficient for an effective vocational-technical program to be conducted.						
7. Vocational counseling services help students see their interests and aptitudes (as well as physical limitations) in light of occupational choices available.						
8. Vocational teachers, guidance counselors, and administrators systematically examine the testing program for vocational students and make revisions where appropriate.						
9. Teachers and students review and understand test results as occupational plans are discussed.						
10. Home visits are made to every interested vocational-technical student prior to enrollment.						
11. Discussion program objectives enables the prospective vocational student and his parents to determine whether the objectives are in line with the student's ability and occupational objectives.						
12. Parent-student-teacher, parent-teacher, and/or student-teacher conferences are summarized and filed (treated confidentially) for future use.						
13. Student occupational objectives as defined in his program are periodically evaluated to determine if adjustments are needed.						
14. Changes in a student's program (after enrolled) can be made when consistent with his performance and after a conference with the teacher.						

	5	4	3	2	1	0
15. Administrators and guidance counselors assist the student in making program changes when he indicates such a desire.						
16. Tools, supplies, machines, and equipment are of sufficient number to conduct a quality program.						
17. Instructional materials used in addition to the textbooks are well selected, current, and easily accessible.						
18. Each student is provided adequate working space and storage facilities						
19. The vocational teacher interprets the program to the school and the community and assists in creating good community relations.						
20. The teacher's skill and content preparation for courses he teaches are of the type and quality supported by the "representative" Advisory Committee.						
21. The teacher belongs to and participates in local civic or other similar organizations.						
22. Occupational experience programs (cooperative, directed, or simulated) are provided for each student in relation to his occupational objectives.						
23. Written training plans are developed for each student's occupational experience program in relation to his occupational objectives.						
24. Records are kept and summarized on the teacher's regular visits to training stations or on evaluations of simulated occupational experiences.						

	5	4	3	2	1	0
25. An active Advisory Committee representing fields in which vocational-technical students are receiving training has been organized.						
26. The Advisory Committee provides the teacher(s), administrators, and the School Board information on current trends and developments in the community as they relate to vocational-technical programs.						
27. The "representative" Advisory Committee assists in providing current occupational information, helping place students and graduates establishing standards and evaluating the program.						
28. An annual follow-up survey of the previous year's graduates is made for the purpose of determining status regarding employment.						
29. Data collected from follow-up studies furnish evidence of how well vocational-technical educational objectives have been met and provide a basis for maintaining and improving the quality of vocational-technical services.						
30. Students are encouraged to reply to follow-up requests when contacted after graduation.						
31. A local occupational survey is completed annually to determine employment opportunities available.						
32. Curriculum content is current and in line with the latest equipment and practices in the field of employment.						

	5	4	3	2	1	0
33. The skills, knowledge, and attitudes required for employment in specific jobs are found in classwork, lab, experience program, and youth activities.						
34. There is an on-going evaluation program of objectives, content, methods, outcomes, and student performance.						
35. Students, parents, teachers, business community leaders, and administrators are involved in the annual program evaluation.						
36. Findings from program evaluation ("feedback") bring about changes in the curriculum.						
37. Vocational youth organization activities are an integral part of the instructional program and the occupational experience program.						
38. Membership and participation in related vocational youth organizations are available to <u>all</u> students enrolled in the program.						
39. The activities of vocational youth organizations are planned, implemented, and evaluated by students.						
40. Each student is evaluated regularly on his work attitudes, relationship with the employer, work habits, and occupational development.						
41. Students exhibit genuine pride in quality workmanship.						
42. Instruction is provided on human relations.						

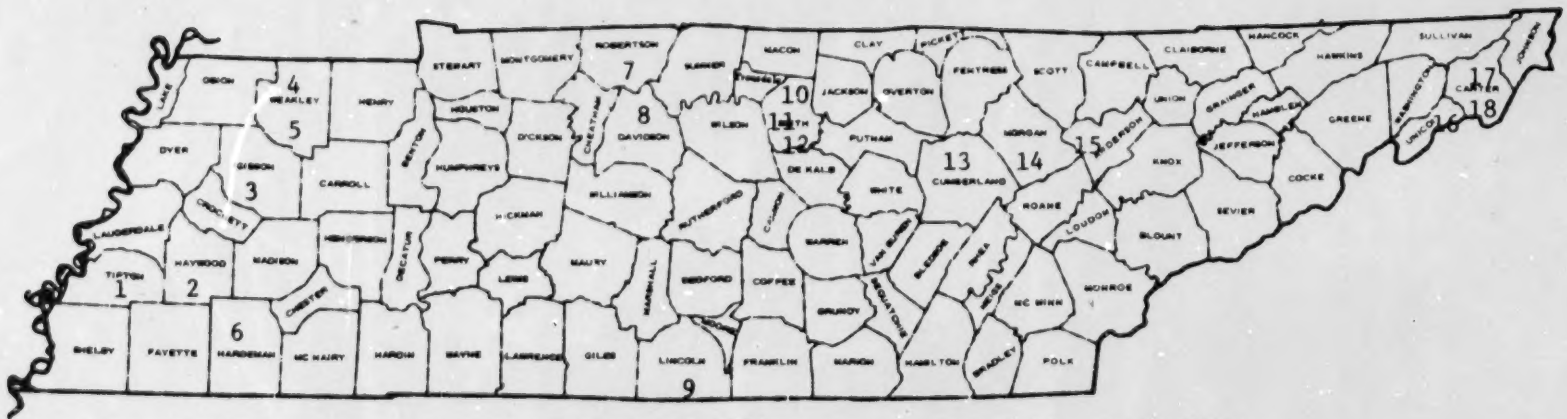
	5	4	3	2	1	0
43. Evaluation is made in terms of the individual's progress toward his own performance objectives--not on the basis of comparing his performance with that of other students.						
44. The vocational student's self-image and total school achievement are favorably affected by the vocational educational experiences.						
45. Ethical practices and standards are goals of the program.						
46. A program of instruction is tailored to the needs and abilities of the individual students.						
47. At least 90 percent of the students who do not transfer or withdraw for health reasons satisfactorily complete their defined programs.						
48. Factors such as absenteeism, tardiness, behavioral problems, and cost of supplies prevent students from completing their defined programs.						
49. An up-to-date file on job opportunities is maintained and made available to students in your department.						
50. The teacher actively assists graduates in securing employment in the occupational area for which they are trained.						
51. A high percentage of graduates are placed in the occupation for which they are trained.						
52. An organized school placement service is available to all vocational graduates.						

	5	4	3	2	1	0
53. Vocational teachers actively seek the employment needs of the community.						
54. Students use sources other than the teacher and/or school to find entry-level jobs.						
55. Your program has a favorable reputation in the community and among employers.						
56. The "average" citizen knows about your program and what it has to offer.						
57. Employers support the program by recommending it to other students and other employers, donating equipment, furnishing consultants, sharing information and materials, etc.						
58. Vigorous efforts are made to insure that <u>all</u> students are informed of vocational-technical educational opportunities and program requirements.						
59. Career occupation information has been developed at the pre-vocational grade level.						
60. Resource persons from all occupational areas are invited to assist in acquainting students with career opportunities.						

<u>COMMENTS AND/OR QUESTIONS</u>

APPENDIX C

STATE OF TENNESSEE



1. Agriculture
2. Vocational Office
3. Distributive
4. Trade and Industrial
5. Agriculture
6. Distributive
7. Vocational Office
8. Trade and Industrial
9. Vocational Office
10. Distributive*
11. Trade and Industrial*
12. Agriculture*
13. Agriculture
14. Vocational Office
15. Distributive
16. Home Economics
17. Agriculture
18. Trade and Industrial

*Did not participate in the study.

Figure 1. Geographic location and vocational education service area of school systems involved in the study.